

**Department of Environmental Conservation
Response to Comments**

For

Homer Wastewater Treatment Facility

APDES Permit No. AK0021245

Public Noticed May 31, 2016 – June 30, 2016

PROPOSED FINAL, 2016



**Alaska Department of Environmental Conservation
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501**

1 Introduction

1.1 Summary of Facility / Permit

The Homer Wastewater Treatment Facility (WWTF) is owned and operated by the City of Homer. The WWTF treats domestic wastewater from both the City of Homer and the nearby smaller community of Kachemak City. The facility also periodically accepts domestic wastewater at its recreational vehicle dumping station. The facility has not undergone major modifications since the last permit issuance nor are there anticipated modifications planned for the upcoming permit cycle.

Wastewater is treated to secondary standards at the facility. The monthly design flow rate of the plant is 0.880 million gallons per day. Treatment at the facility consists of primary treatment, deep-shaft activated sludge, flotation clarifiers, an ultraviolet (UV) radiation disinfection chamber and a supplemental/back-up chlorination and dechlorination unit. The treated wastewater is then discharged to Kachemak Bay at approximately 2,178 feet offshore.

Primary treatment at the plant consists of a mechanical bar screen and a grit chamber. The raw wastewater is then treated in two 30-inch diameter steel-cased shafts completed to depths of approximately 500 feet below surface. The deep-shaft activated sludge process uses the pressures associated with depth to create elevated levels of dissolved oxygen that are used by the biological population to provide treatment of the wastewater. After the wastewater passes through the shafts, it is separated from the remaining solids at the surface and transported to the disinfection area. The effluent is then passed through a UV radiation disinfection chamber. In the event that the UV system is not operating optimally, or the facility is receiving heavy flow volumes, chlorination and dechlorination is occasionally utilized to supplement the UV treatment prior to discharging the effluent to Kachemak Bay. The terminus of the 20-inch outfall pipe has been fitted with a diffuser containing four ports to facilitate mixing of the effluent at the point of discharge. Sludge from the treatment process is treated by aerobic digestion, stabilized in an aerated lagoon, and then freeze dried in beds in the winter. Final disposal of sludge is by land application.

The United States Environmental Protection Agency (EPA) issued the first National Pollutant Discharge Elimination System (NPDES) permit for the discharge in 1992. The NPDES permit was reissued by EPA on August 1, 2000 and subsequently expired on August 1, 2005. Authority for the permit transferred to the Alaska Department of Environmental Conservation (the Department or DEC) upon delegation to the State to administer the NPDES program on October 31, 2008. The DEC-reissued Homer WWTF APDES permit became effective November 9, 2010 and later expired on November 8, 2015. Because the City of Homer submitted a timely and complete application for a new permit prior to the expiration of the NPDES permit, the permit was administratively extended until such time that a new permit could be reissued.

1.2 Opportunities for Public Participation

The Alaska Department of Environmental Conservation (DEC or the Department) proposed to issue an Alaska Pollutant Discharge Elimination System (APDES) wastewater discharge permit the Homer WWTF. To ensure public, agency, local governments and tribal notification and opportunities for participation, the Department:

- identified the permit on the annual Permit Issuance Plan posted online at: <http://www.dec.state.ak.us/water/wwdp/index.htm>
- notified local governments and potentially affected tribes that the Department would be working on this permit via letter, fax and/or email
- posted a preliminary draft of the permit on-line for a 10-day applicant review May 10, 2016 and notified tribes and other agencies
- posted the draft of the permit on-line for a 30-day public comment period on May 31, 2016
- posted the proposed final permit on-line for a five-day applicant review on July 8, 2016
- sent email notifications via the APDES Program List Serve when the preliminary draft, draft, and proposed final permits were available for review

The Department did not receive any comments on the draft permit.

1.3 Final Permit

The final permit was adopted by the Department on **Proposed Final, 2016**.